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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

October 18, 2010

Benny Dehghi
Honeywell,
2525 West 1900th Street
Torrance, CA 90505-6099

Re: EPA Comments on *Draft NHOU GW Characterization Report*, dated April 7, 2010

Dear Mr. Dehghi:

Thank you for your draft submittal. Attached are EPA's comments; however, several other entities have requested to review the document, and they may or may not have additional comments. I will forward those to you as soon as I receive them.

On a broad note, EPA would prefer that the report be separated into two documents: one comprised of Appendices A and B (as updated with the new wells installed since this report was compiled, and which would be the submittal responsive to the requirements in the AOC), and the other with the rest of the report.

Please let me know if you have any questions. I anticipate discussing these comments at our meeting scheduled for October 28, 2010, in EPA's office in LA.

Sincerely,

Kelly Manheimer
EPA Project Manager

Cc: Michael Massey, EPA
Robert McKinney, LA DWP
Larry Moore, CA RWQCB
Richard Slade, ULARA Watermaster
Donald Walsh, MWH

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John Lindquist, CH2MHILL

The following are general comments only. At this time, EPA is not commenting on all the conclusions contained in the report regarding potential sources or areas of incomplete characterization. EPA is scheduling a meeting at which these may be discussed in more detail.

1. **Executive Summary:** We have not commented specifically on the Executive Summary; however, any changes to the main body of the report made in response to these comments may also be applicable to the Executive Summary.

2. **Report Organization, page 1-5:** The Report sections listed on this page don't match the Table of Contents or the section headings in the Report (i.e. Sections 6, 7, and 8).

3. **Waste Disposal Practices, page 4-2, first paragraph:** What is the relevance of the statement "Contaminants affecting SFV groundwater can be traced back to the 1930s, when chemical handling and waste disposal were relatively unregulated"? Is there any data that suggests the contamination affecting NHE-2 dates back to the 1930s? Are there any facilities near well NHE-2 that may have been a source of such contamination?

4. **Contaminant Distribution, page 4-5, first paragraph:** Can the statement "…the occurrence of COCs in NHOU groundwater are associated with industrial manufacturing and waste management activities dating back to approximately the 1930s" be supported with the available data? If there was industrial activity in North Hollywood in the 1930s that included use of COCs, then the Report should provide names or locations of specific facilities and supporting information regarding which COCs were used. Furthermore, it seems that most of the potential source facilities identified in the Report began operation sometime after the conclusion of World War 2. Therefore, it is likely that the groundwater contamination in the NHOU occurred much later than the 1930s, probably in the 1950s, 1960s, and 1970s. If timing of groundwater contamination is important to the development of the groundwater characterization study, then the historical background discussion in the Report should focus more on the periods when most of the contamination likely occurred.

5. **Distribution of TCE, page 4-6, first full paragraph:** The last two sentences of this paragraph suggest that the TCE contamination in Depth Region 1 in the area of the former Bendix facility (and downgradient) appears to be unrelated to concentrations of TCE detected in Depth Region 2 southwest of the NHOU extraction wells because these areas are cross gradient from each other, and therefore the deeper contamination likely has a different source. However, these areas may not have always been cross-gradient from each other. Prior to discovery of TCE contamination in the North Hollywood East water supply wells in the early 1980s (several years before construction of the NHOU extraction wells), the hydraulic gradient in this area likely was different than

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today's, as both the North Hollywood West and North Hollywood East well fields would have been operational prior to 1980. It is premature to make conclusions regarding the source of deeper contamination southwest of NHOU extraction wells NHE-2 and NHE-3 based on the limited evaluation presented in the Report.

6. **Distribution of 1,1,1-TCA and 1,4-Dioxane, page 4-6, first paragraph in Section 4.3.3:** Similar to the discussion of TCE distribution in the area southwest of the former Bendix facility (see Comment 5, above), the following statement is made regarding 1,4-dioxane in this same area: "The central shallow zone area of greater than 1 µg/L 1,4-dioxane extends across the NHE-2 and NHE-6 alignment in a direction counter to groundwater flow, suggesting the influence of multiple contaminant sources." An alternative explanation might be that hydraulic gradients and groundwater flow directions have changed over time, as pumping rates have changed in the area. Although other sources of TCE and 1,4-dioxane may exist southwest of extraction wells NHE-2 and NHE-3, TCE, 1,4-dioxane, and chromium concentrations in groundwater trend southwest from the former Bendix facility and appear to be a potential source for the concentrations of these contaminants southwest of the extraction wells.

7. **Contaminant Fate and Transport (VOCs), page 4-9, second full paragraph:** The statement "In the absence of a continuing source, chemicals with low retardation, such as 1,4-dioxane, can migrate away from the original source without leaving a residual-plume pathway" ignores the effects of secondary porosity mass transfer. In aquifers with silt and clay layers or lenses, conservative contaminants may leave a residual-plume pathway.

8. **Discussion and Conclusions (VOCs, Western Sector), page 6-2, third bullet:** As noted in Comments 5 and 6 above, an alternative explanation for detection of VOCs (and chromium) southwest of NHOU extraction wells NHE-2 and NHE-3 (the area of monitoring wells NH-C18, NH-C19, and NH-C21) may be the plume emanating from the former Bendix facility rather than unknown sources (near Hewitt Pit).

9. **Discussion and Conclusions (1,4-Dioxane, Western Sector), page 6-5, first bullet:** Alternatively, the source of 1,4-dioxane detections southwest of extraction wells NHE-2 and NHE-3 may be the former Bendix facility, as noted in previous comments.

10. **Discussion and Conclusions (1,4-Dioxane, Western Sector), page 6-5, second bullet:** The second sentence of this bullet seems to be suggesting a westward hydraulic gradient in the east part of the former Bendix facility. A westward gradient in this area is not indicated anywhere else in this report or in previous monitoring reports. This possibility (with supporting data) should be further explained. Avibank Manufacturing is listed as a potential source in this area; however, 1,4-dioxane is not listed as a potential contaminant at this facility in the Report.

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11. **Discussion and Conclusions (1,1,1-TCA), page 6-6, first paragraph:** Although the maximum detected concentration of 1,1,1-TCA in the NHOU was 160 µg/L, this detection is anomalously high, occurs far north of the NHOU extraction system, and 1,1,1-TCA was not detected at surrounding wells. It would be helpful if this paragraph explained that most detections of 1,1,1-TCA in the NHOU are in the range from less than one to 16 µg/L, with one detection of 160 µg/L north (upgradient) of Penrose Landfill and Tuxford Pit.

12. **Discussion and Conclusions (Hexavalent Chromium, Northern Sector), page 6-7, last paragraph:** The 50 µg/L detection of hexavalent chromium cited in this paragraph (detected in 1987) is inconsistent with analytical results in the subsequent 20 years. Alternatively, that may have been the detection limit for that sample (50 µg/L was a typical detection limit in that era), and that value could have been incorrectly reported to EPA rather than "ND." Although additional evaluation in this area may be a worthwhile effort in the long run, the more immediate chromium concern for the extraction wells and LADWP's production well fields in the NHOU remains the plume in the area of the former Bendix facility.

13. **Summary, page 7-2, first bullet:** Again, is there any data to support the assertion that contaminants from the 1930s caused the contamination detected in groundwater today? Were there any industrial facilities in the NHOU in the 1930s that used the contaminants of current concern?

14. **Summary, page 7-2, fourth bullet:** Why do chromium concentrations decrease at the NHOU extraction wells? The apparent decrease may be a result of dilution in the convergent flow field at the extraction wells.

15. **Summary, page 7-2, sixth bullet:** This bullet states that the hexavalent chromium plume at the former Bendix facility is well defined and "extends south towards the NHE wells, then southeast along the alignment of NHE wells." In fact, this chromium plume may extend south and downward into Depth Region 2, potentially being the cause of the high chromium concentrations detected at well NH-C18. The geometry of the plume in this area may require additional investigation. This point should be made somewhere in the Report.

16. **Figure 3-1:** LA DWP would like to see a cross-section from the Bendix facility down to NHE-w.

17. **Figures 4-1 through 5-1:** The legend description should be changed to be "*Approximate* San Fernando Valley Area 1 Superfund Site *Investigation Area*". There is no absolute "boundary" to the NHOU, it is based upon where contamination is, and where it can migrate to.

18. **Figures 4-2a through 4-6b:**

    - It would be helpful if the colored fill for the contaminant concentrations were partly transparent, such that the underlying map features could be

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seen. In addition, it would be helpful if facilities discussed in Section 4 of the Report were shown on these maps.

- It would also be helpful if some standard references could be shown on each map, so that they could be compared more easily.
- How were the values for the isoconcentration contours chosen? It would be preferable if the lowest contour matched those used by EPA.

19. **Figure 5-1:** The yellow highlighted areas are not well defined in the legend, although the blue dashed line is defined. Did the search area for potential sources only include the area within the yellow highlighted areas? Again, it would be helpful if the colored fill was partly transparent, so that the underlying map could be seen.

20. **Table 7-1:** Shouldn't the former Bendix facility be included on this table? Should the "LADWP" entry actually be "LADPW" (Los Angeles County Department of Public Works), consistent with Table 5-1 (site #20)? It would be helpful if each facility on Table 7-1 included the corresponding site number on Table 5-1.

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